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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,670	11/11/2003	John M. Morgenstern	SAI.P022 US	8311
32794	7590	12/13/2004	EXAMINER	
KOESTNER BERTANI LLP 18662 MACARTHUR BLVD SUITE 400 IRVINE, CA 92612			HOLZEN, STEPHEN A	
			ART UNIT	PAPER NUMBER
			3644	

DATE MAILED: 12/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/706,670	MORGENSTERN ET AL. <i>[Signature]</i>	
	Examiner Stephen A. Holzen	Art Unit 3644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 10/4/2004
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 27-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 27-46 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

***Response to Arguments***

1. Applicant's arguments filed 10/04/2004 have been fully considered but they are not persuasive. The applicant has suggested that Whitner does not employ the area rule in the design of the vertical fin. The examiner disagrees. Whitner teaches that it is well known in the art to employ the area rule when designing an aircraft. The entire aircraft that Whitner teaches thus was designed with the area rule in mind. The applicant has asserted, "if the vertical fin in Whitener was area ruled, the cross-sectional area of the fin and aircraft would not depart from the Sears-Haack curve as much as shown in Figure 7. The examiner disagrees. Just because Whitner's prior art aircraft's characteristics don't perfectly estimate the Sears-Haack curve has no bearing on whether or not the area rule was employed. In fact this is a separate issue, involving accuracy of estimates, not whether a method was employed in designing the vertical fin. The applicant has further asserted that the cross sectional area of the vertical fin (48) does not decrease in the middle. However, Whitner shows in Figure 7 a waisted cross sectional area.

Finally the phrase "area ruled" as employed in this application is nothing more than a product by process limitation. This limitation has been consider a product by process limitation, because the phrase "area ruled" refers only to the method of designing the vertical fin, and does not impart any explicit or implicit structural or other material limitations. Since the patentability of a product does not depend on its method of producing, Whitner anticipates the limitation "area ruled".

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 27-29, 31-39, 41 and 43-45 rejected under 35 U.S.C. 102(b) as being anticipated by Whitener (4,390,150).

Whitner discloses an area ruled fine having a waisted area (see #48), a body coupled to the base of the vertical fin (see Figure 6), wherein the vertical fin includes the waisted area at the junction with a horizontal stabilizer, wherein the apparatus is an aircraft (see Figure 7), an area ruled strake coupled to the root of the vertical fin (inherent that the entire plane was designed with the area rule in mind, also the examiner asserts that the phrase "area ruled" is a product by process limitation), a tip of the vertical fin, wherein the craft is a watercraft (inherent that planes aircraft and act as watercraft during an emergency crash), wherein the craft is a automobile (inherent that aircraft is an automobile when taxiing)

Re – Claim 38: This is a product by process claim. This limitation imparts no further structural limitations to the claim.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 30 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whitener in view of ordinary skill in the art. Whitener discloses every aspect of the present invention except wherein the vertical fin has multiple waisted areas. However per the applicant's own teachings and those found in Whitener, the shape and size of the aircraft fuselage, wings and fins are result effective variable. It would have been obvious to experiment and choose any number of waisted sections and any shape that produced the desired effects.

6. Claims 40, and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whitener in view of Hartmann (D 417,184). Whitener discloses every aspect of the present invention except wherein the apparatus has an inverted V-Tail. Hartmann et al discloses that it is well known in the art to employ a V-tail on supersonic aircraft. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ an inverted V-tail for increased overall efficiency of the plane.

***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen A. Holzen whose telephone number is 703-308-2484. The examiner can normally be reached on M-F 7:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teri Luu can be reached on 703 305-7421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3644

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sah



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